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Seventh Biennial Report
of the
State Board of Health

to the
Governor of Oregon
and the
Twenty-Ninth Legislative Assembly
Regular Session

1917



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REPORT

To the Honorable, the Governor and the Legislative Assembly of the State of Oregon:

Gentlemen: For your consideration and approval, herewith is submitted a brief report of the work accomplished and the expenditures of the State Board of Health for the biennial period from September 30, 1914, to September 30, 1916.

During this biennium, eight quarterly and five special meetings of the State Board of Health were held. These meetings were particularly concerned with the enactment of new legislation and work of a new and constructive nature.

ORGANIZATION OF THE STATE UNDER THE NEW VITAL STATISTICS LAW

Of paramount importance in new legislation and constructive work is the organization of the Vital Statistics Department as provided in Chapter 268, Session Laws of 1915. This department includes the reporting of births and deaths to the State Board of Health through local registrars. During the period between July, 1915, and October, 1916, the entire State has been subdivided as provided by law into two hundred and forty-eight registration districts. The local registrars in charge of these districts have been selected and appointed by the secretary in person. In brief, the State now operates under an efficient and thorough system of vital statistics. Prior to 1915, each county reported to the State Board of Health as a unit. That the present system is more thorough is obvious when it is considered that two hundred and forty-eight independent units now report as compared with only thirty-five units under the old law.*

A state satisfactorily operated under this system is admitted to the "Federal Registration Area," which implies that the Federal Census Bureau publishes vital statistics as correct. Formal application is now being made to have Oregon included in the Federal Registration Area, which now consists of twenty-five states.

Accurate vital statistics are necessary for properly conducting the activities of a board of health. Without a uniform and accurate system of statistics there is no intelligible method of gauging the results of the efforts of a health department. The benefits accruing from the proper execution of this work

*A special publication is now being prepared which will give full, detailed instructions to local registrars, physicians, undertakers, and midwives, for the operation of this act. There will also be included a complete set of individual county section maps showing these registration districts.

are too numerous to mention in detail, but it will suffice to say that the State is subdivided into several units of such size that they enjoy a proper supervision. Under the old law each unit was composed of a county. County units are too large and the population too scattered to furnish accurate reports of births and deaths, and as a result there occurred formerly, districts in which the Board of Health never received certificates of births and deaths. Vital statistics are not only of paramount importance in executing board of health work, but are also absolutely essential in legal proceedings and in determining the progress or retrogression of civic conditions of all communities. In organizing and operating a state under this new system, expenditures have been more than quadrupled. This increased expenditure is justifiable because a questionable or poorly organized system of vital statistics is worthless, and false deductions are consequently made from the recorded statistics. The registration districts into which each county is subdivided are as follows:

| | <i>Districts</i> | | <i>Districts</i> | | <i>Districts</i> |
|------------------|------------------|-----------------|------------------|------------------|------------------|
| Baker | 10 | Jackson | 8 | Sherman | 3 |
| Benton | 4 | Jefferson | 3 | Tillamook | 12 |
| Clackamas | 9 | Josephine | 6 | Umatilla | 10 |
| Clatsop | 5 | Klamath | 11 | Union | 8 |
| Columbia | 7 | Lake | 10 | Wallowa | 5 |
| Coos | 8 | Lane | 11 | Wasco | 7 |
| Crook | 11 | Lincoln | 10 | Washington | 11 |
| Curry | 6 | Linn | 8 | Wheeler | 3 |
| Douglas | 9 | Malheur | 9 | Yamhill | 7 |
| Gilliam | 3 | Marion | 10 | | |
| Grant | 4 | Morrow | 3 | Total..... | 248 |
| Harney | 2 | Multnomah | 6 | | |
| Hood River | 3 | Polk | 6 | | |

To be admitted to the Federal Registration Area, it will be necessary to have at least three hundred districts. These new districts will be added early in the coming summer when the State is again visited by the secretary.

BIRTHS AND DEATHS

During the biennium, a total of 24,520 birth certificates were received, of which 12,581 are males and 11,939 are females; a total of 13,458 death certificates were received, of which 8,035 are males and 5,423 are females. These certificates have been card indexed, bound, and filed as permanent records. Certified copies of birth and death certificates are constantly issued as required for legal proceedings.

It is encouraging to note that although the State is still in a condition of being organized, the birth and death certificates have increased over the last biennium. This increase is 2,728 in births and 920 in deaths.

That birth and death returns can and should be made more complete is emphasized by the following table, which shows the returns biennially since 1903, when the State Board of Health was inaugurated.

BIRTH AND DEATH RETURNS FROM 1903 TO 1916

| | <i>Births</i> | <i>Deaths</i> |
|--|---------------|---------------|
| July 1, 1903, to September 30, 1904 | 5,358 | 3,696 |
| October 1, 1904, to September 30, 1906 | 10,068 | 6,893 |
| October 1, 1906, to September 30, 1908 | 19,161 | 13,139 |
| October 1, 1908, to September 30, 1910 | 17,306 | 11,106 |
| October 1, 1910, to September 30, 1912 | 19,062 | 11,706 |
| October 1, 1912, to September 30, 1914 | 21,792 | 12,538 |
| October 1, 1914, to September 30, 1916 | 24,520 | 13,458 |

OTHER ADVANTAGES OF A SMALL UNIT SYSTEM

In the same manner that data on births and deaths can best be secured by a subdivision of the State into several small units, so also can other statistical data such as the incidence of cancer, tuberculosis, goiter, contagious, and other diseases, be obtained. To make a critical study of the various communities with the object of instituting control and preventive measures, the various units must not be too extensive in size, because the larger the unit the more difficulty is encountered in obtaining the results sought for.

MARRIAGES

During this same period, there were 9,505 marriages.

CONTAGIOUS DISEASES

The following table shows the more important contagious diseases as regards cases and deaths:

| | <i>Cases</i> | <i>Deaths.</i> |
|---------------------------------|--------------|----------------|
| Tuberculosis | 814 | 1,236 |
| Typhoid | 407 | 115 |
| Diphtheria | 696 | 46 |
| Scarlet fever | 836 | 10 |
| Measles | 1,694 | 11 |
| Smallpox | 719 | 4 |
| Other infectious diseases | 1,522 | 73 |

CONTROL OF COMMUNICABLE DISEASES

Good health statutes and Board of Health rules exist for the control of communicable diseases, but failure of local health administrations to enforce them, defeats their purpose. There is a failure on the part of many physicians to report or quarantine contagious or communicable diseases and this condition will continue to exist as long as the Board of Health is inadequately provided for, and has no field representative to enforce health statutes and health rules and regulations. The secretary is continually called to various parts of the State to aid local administration to check the onset or spread of epidemics. It is physically impossible, however, for the secretary to supervise all Board of Health activities and also act as field representative in epidemiological work. Furthermore, for the most part, city, and especially rural schools, have no definite system or organization in the control of communicable diseases, and it is the exception where school boards employ physicians as inspectors.

During the summer of 1916, Oregon was threatened with the importation of infantile paralysis cases from east of the Rocky Mountains. The Board of Health, realizing the seriousness of the situation, called a conference on July 15, consisting of the health authorities representing the states of California, Montana, Idaho, Washington, Oregon, and the province of British Columbia. At this conference, the following uniform set of rules and regulations were adopted for these states and British Columbia:

RULES AND REGULATIONS

1. Surgeon General of the United States Public Health Service be requested to notify the State Health Officer of each State and Province represented here, of any person leaving an infected area, destined for such state; giving the name of such person and the date of leaving the infected area.
2. Railroad regulations: That the various railway companies be requested to notify the State Health Officer of any person holding a ticket from an infected point, the details of such report to be arranged by the State Health Officer with the various railway officials.
3. That the various railway companies be requested to notify the State Health Office of any sick person on any train entering the State.
4. Sick persons shall be treated according to public health regulations of the State or Province.
5. To keep suspected persons under observation for twenty days.

The Board of Health secured the cooperation of the railroads and the Public Health Service in enforcing these rules and regulations. The advantages of this system were that railroad traffic was not interfered with and no person could

leave an infected district from the East and enter Oregon or any of the other mentioned states, without the State Board of Health being apprised thereof. This is possible by means of notification through cards from the Public Health Service and the various railroads. These cards were delivered to the various health officials by the passenger agents, and thus incoming suspects were kept under observation for twenty days. A system of this kind serves only to check the importation of cases. The State must be prepared to handle epidemics which spring up in the State itself. There is a strong likelihood of extensive epidemics of infantile paralysis occurring in Oregon during the summers of 1917 and 1918, and the State Board of Health will be severely hampered if not sufficiently provided with funds.

LEGISLATION TO CONSERVE THE PURITY OF STREAMS AND PREVENT CONTAMINATION BY SEWAGE SYSTEMS

The 1915 Legislature is to be commended upon the passage of Chapter 73, an act which protects and conserves the purity of municipal and domestic water supplies of Oregon and prevents the pollution of streams. In brief, this act requires that any incorporated town or city desiring a new water supply for drinking or culinary purposes, or any person or corporation who shall undertake a new water supply for a town or city or for any number of persons exceeding ten families or a total of fifty persons, must, before installing any system, secure a permit from the State Board of Health. Permits are issued only after approval of all details submitted to the Board on the proposed system. Furthermore, a city or town proposing to install a sewer system or any individual or corporation proposing to install a system of sewerage or disposal of waste products for the use of more than five families or fifty persons, must likewise secure a permit before any installations are made. The benefits accruing to the State from a law of this kind are so apparent that little need be said of its advantages.

When streams from which municipal supplies are secured are originally pure, legislation of this nature will conserve for all time the purity of water supplied for growing towns or for municipalities still to be built and developed. Of inestimable benefit also is the assurance to a town or city securing the proper installation of water and sewage systems, which in the course of time will prove to be free from complications or necessity for alterations.

The water systems approved by the State Board of Health have been installed by the cities of Ashland and Gaston, and an auxiliary concrete reservoir for Oregon City. Water systems for Grass Valley, Brookings, Silverton, Florence and Molalla are now pending approval. Approved sewer systems have been installed in Hubbard and Myrtle Point and a refuse disposal system for the Utah-Idaho Sugar Company at Grants Pass. Sewer systems for Brookings and Woodburn are now pending approval.

To receive particular benefit also from this act are the various lumber and construction camps, as in each case the workmen are assured a pure drinking supply and are protected from infection through waste and sewage products. Under the jurisdiction of this act comes also amusement parks, picnic grounds, fairs, etc.

LEGISLATION TO PREVENT INFANT BLINDNESS

Another commendable act of the Legislature of 1915 was the passage of Chapter 210, an act to prevent blindness and imposes a duty upon midwives, nurses, and persons having the care of infants, and also upon the health officers, and fixes a penalty for the neglect thereof. Under this act, occurrence of inflamed eyes in infants is reportable to the health officer or legally qualified physician.

Upon receiving a report of this nature, it is the duty of the health officer or physician to cause proper preventive and treatment measures to be instituted. Report blanks have been prepared and distributed throughout the State. On the reverse side of these blanks are instructions for the treatment of infant sore eyes and a copy of the law. In addition to this, there have been distributed pamphlets describing the nature of infant blindness. There has long been felt a need for a measure of this kind, and strict enforcement of this law will materially suppress the occurrence of infant blindness.

RABIES

During this biennium, the Board of Health has continued its effective work in the diagnosis and suppression of rabies. Model ordinances, which have an object to prevent rabies, have been distributed by the Board of Health throughout the entire State, and these are enjoying a uniform enforcement in most cities. There has also been made an agreement between the Oregon and California boards of health, which

requires a permit before any sheep dog can be transferred from one state to the other. During the period from October 1, 1914, to October 1, 1916, forty Pasteur treatments have been administered by this department to persons who have been bitten by rabid animals. Perfect recovery has occurred in each case. One hundred and seventy-three heads of animals have been sent in for the diagnosis of rabies.

EDUCATIONAL WORK

In traveling over the State organizing the vital statistics law, the secretary gained an intimate knowledge of the existing conditions in the various cities and rural communities, and in addition to this work of organization, local health administration was studied and necessary adjustments made to insure more effective work. Municipal water and sewage systems were inspected and notices prepared for their improvement when found necessary. Several prosecutions were made where health statutes were violated.

In the matter of city and rural school sanitation, it was observed that here exists a most neglected field of activity. During the years of 1913 and 1914, the Board of Health secured the services of two nurse school inspectors, one for a period of eight months and the other six months. Through lack of funds this was discontinued, with the result that this very important work in the prevention of disease and in the improvement of living conditions of children, had to be neglected. This was the first actual constructive work in school sanitation ever undertaken by the Board of Health, and it will prove a discredit to the State of Oregon if funds are not secured to resume this very essential work.

As regards child hygiene activities and correlative work, which activities reduce the death rate of infants, it was noted that local health administrations universally avoid this, the second most important work in public health.

TUBERCULOSIS

Throughout the State, there exists no organized activities in the control and suppression of tuberculosis. From funds received by the Oregon Anti-Tuberculosis Society in their annual sale of Red Cross Seals in December, 1915, a survey nurse was sent out into the counties of Lane, Clatsop, Jackson and Josephine. In these counties alone, were found 752 cases. This survey reveals the fact that tuberculosis is not only exceedingly prevalent, but occurs in persons employed as bakers,

candy makers, cooks, butchers, waiters and dairymen. It is obvious that this accounts for the yearly increase in deaths from tuberculosis.

HOTELS AND SUMMER RESORTS

As a result of the Board of Health not being able to employ inspectors, the hotels and summer resorts throughout the State in a great many instances are operating under such insanitary conditions as to be a menace to the health of the public. Visits are constantly being made by the secretary to these places, but the inspection is of necessity unsystematic and incomplete.

STATE AIDED INSTITUTIONS AND POOR HOUSES

By legislative act in 1913, it became incumbent upon the State Board of Health to inspect and grant licenses to the State aided institutions and poor houses. These institutions have been visited and inspected by the secretary, but some provision will be necessary for the board to institute a more regular and systematic method of supervising these institutions. As the board is unable to secure, through lack of funds, a field representative, it is impossible for the secretary alone to make all inspections of these and other institutions.

REDUCTION PLANTS

In the outskirts of Portland are a number of rendering plants, which reduce to fertilizer and other products the carcasses of diseased animals, secured from Portland and vicinity. These plants constitute a menace to public health and are extremely obnoxious. Several visits have been made to these places, but conditions are only temporarily improved. There is a need for State legislation to condemn these plants, unless properly conducted.

RECOMMENDATIONS

The State Board of Health requests the Honorable Governor and the Legislative Body to consider the following recommendations.

Before going into detail regarding the activities of the Board of Health, your perusal of the itemized expenditures on page 1 will reveal the fact that under the present appropriation it is impossible to send throughout the State any field representative. The work in organizing the vital statistics law was done entirely in person by the secretary, with a sacrifice to the work in the office and other branches.

As a guide in analyzing a budget for the Board of Health, we submit the authoritative work of the Russell Sage Foundation by quoting a table showing the relative values in public health work:

| | |
|-------------------------------------|-----------|
| Control of communicable diseases— | |
| Tuberculosis | 12.1 |
| Venereal diseases | 6.6 |
| All others | 25.3 |
| Infant hygiene | 20.3 |
| Privy and well sanitation | 3.5 |
| Milk control | 2.7 |
| Fly and mosquito suppression | 2.4 |
| Food sanitation | 0.1 |
| Inspection of school children | 7.0 |
| Vital statistics | 5.0 |
| Education | 5.0 |
| Dispensary and clinics | 5.0 |
| Laboratory | 5.0 |
| Total | 100.0 |

A careful analysis of this table and the expenditures of the Board of Health, shown on page 13, will make it apparent that it is impossible to prosecute public health work, giving due attention to the relative values of the various health activities. In order to intelligently continue the work of the Board of Health, the following additions are recommended:

- (1) Reinstatement of school nurse to inspect school children and supervise school sanitation.
- (2) A deputy health officer who is also an epidemiologist to act as alternate for the State Health Officer. There is a need for representation in the office and in the field.
- (3) A field representative—needed to cover the entire State on inspections, for educational purposes, and to extend the State Board of Health activities throughout the State among the people.
- (4) A stenographer—needed for increased office work.

These additions are necessary because, as previously mentioned, there is an absence in the State of any organized effort (1) for the prevention and control of tuberculosis—this represents 12.1% of the total Board of Health activities; (2) there is an absence of any regular child hygiene or infant welfare department, which represents 20.3% of the total of health work; (3) there is an epidemiologist needed for the department, whose duty it is to supervise the suppression of communicable diseases, which represents 25.3% of total health activities; (4) there exists an absence of systematic rural and city school sanitation, which represents 7% of the total activities; (5) in approving the installation of municipal

sewage and water systems, the services of a consulting engineer are necessary to pass on the plans and specifications submitted, as well as making trips of inspection.

Without going into confusing details, permit it to be stated that it is absolutely impossible to prosecute the previously mentioned Board of Health activities, as well as other correlative work, with no field representatives. Besides, should the requested additions be made to the Board of Health, a due regard will be had in detailing them to various duties, keeping in mind the relative value of the different health activities. Provision must also be made for increased office and clerical work in supervising this extended and greatly needed work.

BUBONIC PLAGUE FUND

House Bill No. 125 of the 1913 Legislature appropriated \$10,000.00, to be used for the prevention and spread of bubonic plague, cholera and other menacing Asiatic diseases prevalent in China, which through channels of commerce seriously threatened an invasion into the State of Oregon. The State Board of Health entered into a contract with Dr. David N. Roberg, then professor of pathology and bacteriology of the University of Oregon, to secure his services for a period of two years, beginning with July 1, 1913, and closing July 1, 1915. Dr. Roberg did special work in the Orient, investigating tropical diseases and sanitation, securing in Manila a degree of doctor of tropical medicine. On June 7, 1915, Dr. Roberg returned to America and, arriving in San Francisco, was instructed by the Board of Health to remain there to make a special study of sanitation and public health methods, as administered by the state and Federal health authorities. On February 23, 1915, the Legislature repealed this act, becoming inoperative on May 22, at which time the contract with Dr. Roberg was broken, cutting off his salary and expenses from May 23 to and inclusive of the month of June. The Board of Health recommends that Dr. Roberg be reimbursed the sum of four hundred and eighty-two dollars and fifty-eight cents (\$482.58), being the sum due him for salary and expenses incurred in fulfilling his duties, as ordered by the Board of Health. It is a noteworthy fact that of the \$10,000.00 appropriated for this work, only \$6,216.03 was expended.

LABORATORY

The work of the laboratory during the past biennium has been as follows:

| | |
|--|-------|
| Blood for malaria, blood counts, etc. | 52 |
| Diphtheria | 1,073 |
| Faeces | 15 |
| Heads of animals for rabies | 173 |
| Milk | 91 |
| Smears for gonococci | 207 |
| Sputum | 850 |
| Urinalysis | 86 |
| Wasserman examinations for syphilis | 127 |
| Water as to its fitness for domestic use | 1,344 |
| Widals for typhoid | 399 |
| Miscellaneous | 112 |
| Total | 4,529 |

Besides this, forty Pasteur treatments were administered in the offices of the State Board of Health, the virus being furnished by the Hygienic Laboratory in Washington, D. C.

As in the past, the Board of Health has made analyses of water furnished trains in interstate traffic, according to the rules of the United States Treasury Department.

EXPENSES OF STATE BOARD OF HEALTH DURING BIENNIAL PERIOD, FROM SEPTEMBER 30, 1914, TO SEPTEMBER 30, 1916

| | |
|---------------------------------------|-----------|
| Automobile and upkeep | \$ 852.83 |
| Books | 132.10 |
| Child Welfare exhibit | 75.80 |
| Express, freight and cartage | 79.72 |
| School health officer badges | 368.66 |
| Ice | 124.26 |
| Laboratory upkeep | 1,181.55 |
| Laundry | 104.88 |
| Maps | 395.31 |
| Office supplies and upkeep | 470.54 |
| Postage | 422.49 |
| Printing, engraving and binding | 2,563.97 |
| Rental of offices | 2,238.00 |
| Telegrams | 115.69 |
| Telephones | 459.14 |

SALARY ACCOUNT

| | |
|--|----------|
| Dr. Calvin S. White, secretary State Board of Health and State Health Officer. Salary October 1, 1914, to September 30, 1915 | 4,000.00 |
| Dr. Calvin S. White, deputy health officer. Salary October 1, 1915 to November 15, 1915 | 375.00 |
| Dr. David N. Roberg, deputy health officer. Salary July 12, 1915, to September 30, 1915 | 661.30 |

| | |
|--|----------|
| Dr. David N. Roberg, secretary State Board of Health and State Health Officer. Salary October 1, 1915, to September 30, 1916 | 4,000.00 |
| Dr. J. Shelley Saurman, director State bacteriological laboratory. Salary October 1, 1914, to April 15, 1915 | 1,462.50 |
| Miss Emma M. Howe, assistant bacteriologist. Salary October 1, 1914, to April 1, 1915 | 600.00 |
| Miss Emma M. Howe, acting bacteriologist. Salary April 1, 1915, to September 30, 1916 | 2,643.09 |
| Miss Anna L. McBride, clerk. Salary October 1, 1914, to December 31, 1915 | 1,125.00 |
| Miss Anna L. McBride, assistant State Registrar. Salary January 1, 1916, to September 30, 1916 | 900.00 |
| Miss Pearl Emken, stenographer. Salary October 1, 1914, to September 30, 1916 | 1,835.00 |
| Miss B. L. Morgan, office assistant. Salary December 1, 1915, to September 30, 1916 | 322.00 |

SPECIAL SERVICE ACCOUNT

| | |
|--|--------|
| Dr. G. H. Huthman, veterinary services for rabid animals | 8.00 |
| Dr. Frank McCauley, services as deputy Health Officer | 60.00 |
| L. C. Kelsey, consulting engineer | 25.00 |
| E. A. Taylor, special engineering services | 28.60 |
| B. L. Morgan, assisting in clerical work | 77.42 |
| Mrs. S. Patton, assisting in clerical work | 15.00 |
| R. F. Maddren, assisting in laboratory work | 140.32 |
| Dr. J. K. Klecan, assisting in laboratory work | 62.50 |
| D. H. Nickson, assisting in laboratory work | 56.90 |
| Dr. C. J. McCusker, assisting in stereopticon lecture | 5.20 |
| Chris Schubel, fee and expenses in Van Brakle case | 64.00 |

TRAVELING EXPENSE ACCOUNT

| | |
|---|-------------|
| Dr. Calvin S. White, secretary and State Health Officer | 268.60 |
| Dr. David N. Roberg, secretary and State Health Officer | 1,088.18 |
| Dr. J. Shelley Saurman, director State bacteriological laboratory | 118.80 |
| Miss A. L. McBride, assistant State Registrar | 18.50 |
| Dr. E. B. Pickel, member of State Board of Health | 154.80 |
| Dr. T. J. Higgins, member of State Board of Health | 34.30 |
| Dr. A. C. Seely, member of State Board of Health | 100.20 |
| Dr. A. C. Smith, member of State Board of Health | 7.50 |
| Dr. W. B. Morse, member of State Board of Health | 10.00 |
| Dr. E. A. Pierce, member of State Board of Health | 7.50 |
| Total | \$29,860.15 |

Respectfully submitted.

W. B. MORSE, M. D., President.

A. C. SEELY, M. D., Vice-President.

E. B. PICKEL, M. D.

ANDREW C. SMITH, M. D.

E. A. PIERCE, M. D.

M. B. MARCELLUS, M. D.

DAVID N. ROBERG, M. D.,

Secretary and State Health Officer.